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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/521,143

09/06/2005

Rainer L.M Klopp

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PROSKAUER ROSE LLP

PATENT DEPARTMENT

1585 BROADWAY

NEW YORK, NY 10036-8299

EXAMINER

WU, IVES J

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1797

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/521,143	Applicant(s) KLOPP ET AL.	
	Examiner IVES WU	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>01/13/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- (1). **Claims 1-14** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 12, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claims 2-11 and 13-14 are rejected because they are dependent claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- (2). **Claims 1-2, 4-5 and 11-14** are rejected under 35 U.S.C. 102(b) as being anticipated by Lowe et al (US02196592).

As to a device having nozzles connected to a fluid supply and arranged in the vicinity of at least one lengthwise section of a boundary of the area, which respectively emit an upwardly directed liquid jet starting from ground level in the event of the incident and are positioned at a mutual spacing such that at each position of the lengthwise section an air-gas flow starting from the bottom of the area, essentially directed perpendicularly to the bottom and entraining the gas flowing at ground level, is created by the overlap of the liquid jets respectively emitted by the nozzles, nozzles being arranged in a channel formed along the lengthwise section at a vertical distance from its outlet opening in **independent claim 1**, the nozzle emitting a liquid spray jet in **claim 2**, Lowe et al (US02196592) disclose fire extinguishing system (Title). It relates to fire extinguishing apparatus or systems in which overhead and preferably underneath are employed

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for instance, in the case of hangars adapted for the storage of aeroplanes or aircraft or other buildings or enclosures in which highly inflammable material is housed (page 1, Col. 1, line 1-8). The sprinklers employed in the ceiling as well as the floor sprinklers are of the normally open type, so that the flow of water or other extinguishing medium will not be delayed by the presence of air banking up in the distributing piping (Col. 2, page 2, line 41-46), while 2' indicates normally open sprinkler heads adapted to direct streams of fire extinguishing medium upwardly from the floor when the normally closed main valve 3 opens connection from the source of supply 4 of the fire extinguishing medium to the piping 1. Sprinkler heads 2' may be countersunk, if desired, in depressions in the floor surface to avoid injury to the same (page 2, col. 2, line 58-68). The extinguishing medium is immediately discharged in upwardly directed streams from the normally open floor sprinklers 2' to extinguish any incipient fire that may arise at any place over the storage floor space in the hangar or in the stored contents such as the aeroplane (page 3, col. 2, line 39-42, col. 1, line 50-55). It would carry a air-gas flow by overlap of the liquid jets respectively emitted by the nozzles as claimed. It is further illustrated in the following figure which reads on the limitations of instant claim.

Fig. 1.

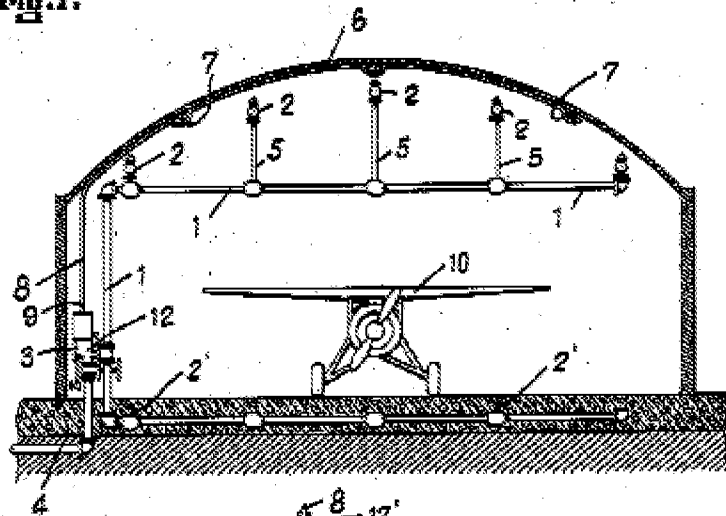
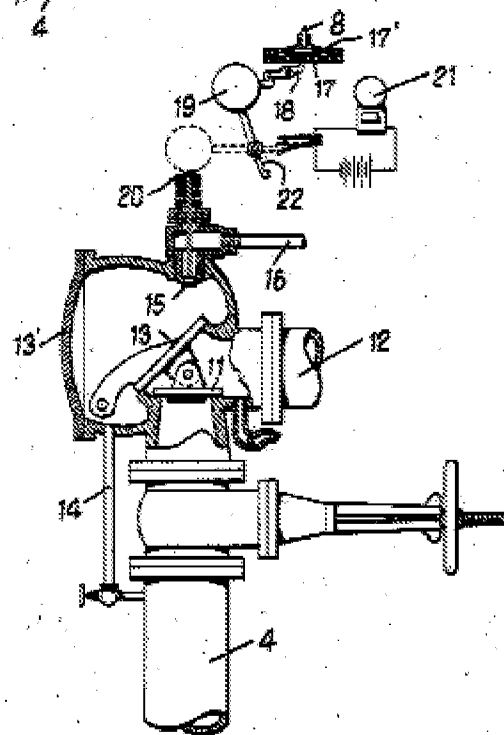


Fig. 2.



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 BY John R. Hamilton
 TOWNSEND & DECKER
 ATTORNEYS.

As to fluid supply applying a high pressure to the fluid emerging from the nozzle in **claim 4**, and outlet openings of the nozzles being arranged below the surface of the ground in **claim 5**, it would use high pressure to emit the medium upwardly from the ground and nozzles below the ground surface as illustrated in figure and discussions above.

As to fluid being water in **claim 11**, Lowe et al (US02196592) disclose water (Col. 2, line 43).

As to step of isolating an area against the spreading of gases coming from a structure such as a machine, a storage unit or a production system in a method in **independent claim 12**, Lowe et al (US02196592) disclose the discharge of water or other medium from below and above being accomplished quickly enough to hold the fire to its original location thus confining the spread thereof with saving of material and building and eliminating unnecessary water damage (Col. 3, col. 2, line 59-64).

As to an air-gas flow starting from the bottom area, essentially directed perpendicularly to the bottom and entraining upwards the gas flowing at ground level to be produced at least a lengthwise section of the boundary of the area in the event of an accident by forming an upwardly directed liquid barrier starting from ground level from liquid jets, the liquid jets being produced by nozzles which are arranged in a channel, at a vertical distance from outlet opening of the channel in **independent claim 12**, the disclosure of Lowe et al is incorporated herein by reference, the most subject matters as currently claimed, have been recited in Applicants' claim 1, and have been discussed therein.

As to a plurality of nozzles being positioned at a mutual spacing along the lengthwise section such that at each position of the lengthwise section air-gas flow entraining the gas flowing at ground level being created by the overlap of the liquid jets respectively emitted by the nozzles in **claim 13**, the disclosure of Lowe et al is incorporated herein by reference, the most subject matters as currently claimed, have been recited in applicants' claim 1, and have been discussed therein.

As to a pressurized fluid under high pressure to be applied to the nozzles in **claim 14**, Lowe et al (US02196592) disclose charging upwardly directed stream of the extinguishing medium (page 3, col. 2, line 34-36), it would be a pressurized fluid applied to the nozzle.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

(3). **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe et al (US02196592) in view of Newland, Sr. (US03109593).

As to nozzles emitting a flat jet spreading in the shape of a fan along the lengthwise section in **claim 3**, Lowe et al (US02196592) disclose the upwardly emitting medium by sprinkler. Lowe et al **do not teach** the fan shape flat jet as claimed.

However, Newland, Sr (US03109593) **teaches** hydro-flame arrestor (Title). The pattern formed by the novel nozzle and has a fan-shape and a uniform density (Col. 1, line 44-46).

The advantage of fan-shape flat jet is to have a good coverage over a large area (Col. 1, line 47, 25-29).

Therefore, it would have been obvious at time of the invention to emit the medium to form a fan-shape disclosed by Newland, Sr. by the sprinklers of Lowe et al in order to attain the advantages cited above.

(4). **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe et al (US02196592).

As to the outlet opening of the channel to be delimited by a sharp edge at least on its lengthwise side facing the structure in **claim 6**, it would be obvious to have sharp edge shape delimited for the outlet of channel because the changes in shape does not affect functions (sprinkler). In re Daily, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

(4). **Claims 7-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe et al (US02196592) in view of Araki et al (US04974779).

As to nozzles emitting an upwardly directed gas to be distributed along the lengthwise section in **claim 7**, Lowe et al (US02196592) disclose the presence of air banking up in the distributing piping (page 2, Col. 1, line 45-46). Lowe et al **do not teach** nozzles for gas as claimed.

However, Araki et al (US04974779) **teach** screen forming apparatus and method. An air-water device provided with the pipe for mixing the water with air, a number of nozzles disposed along the longitudinal direction of the pipe at predetermined intervals for injecting the water in the form of screen, and a device for producing air curtains flowing along the front and rear surfaces of the screen in order to maintain the screen substantially uniform in thickness (Abstract).

The advantage of air curtain formed by emitting air/gas by air nozzle is to maintain the screen uniform in thickness and water does not disperse even at the region spaced from the nozzles (Col. 2, line 40-57).

Therefore, it would have been obvious at time of the invention to install the air nozzles of Araki et al in the fire extinguishing system of Lowe et al in order to attain the advantage cited above.

As to nozzles being connected to a compressed air supply in **claim 8**, Araki et al (US04974779) disclose a pump 56 for conveying the whitish gas such as dry ice under predetermined pressure is joined to the inlet of the gas ejection pipe 52 (Col. 6, line 34-36).

As to air delivery instruments which provide directed delivery of the ambient air on this side into the air-gas flow produced by the nozzles in **claim 9**, air delivery instruments being designed as air feed channels leading from the surface of the ground into the vicinity of the nozzles in **claim 10**, Araki et al (US04974779) disclose the air ejection pipes to be arranged in parallel relation with the water curtain (screen) forming pipe (Col. 2, line 50-53). It would be obvious to have air delivery instruments as arranged in instant claims 9 and 10 because the rearrangement of parts render obvious. *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to IVES WU whose telephone number is (571)272-4245. The examiner can normally be reached on 8:00 - 5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner: Ives Wu

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Date: July 16, 2008

/Duane S. Smith/
Supervisory Patent Examiner, Art Unit 1797
7-21-08